

REMARKS

Applicants have thoroughly considered the Examiner's remarks, and the application has been amended in light thereof. Applicants thank the Examiner for the indication that 3, 4, 7, 8 and 15-20 include allowable subject matter. Claims 1-22 are presented in the application for further examination. Claims 1, 8, 10 and 12 have been amended by this Amendment A. Reconsideration of the application claims as amended and in view of the following remarks is respectfully requested. The following remarks will follow the sequence of the Office action (the numerals at the beginning of each paragraph below correspond to the numbered paragraphs of the Office action).

1. The specification is objected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner suggests that the subject matter recited in claims 21 and 22 is rejected for not being supported by the detailed description of the invention. Applicants submit that contrary to the Examiner's suggestion, the subject matter recited in claims 21 and 22 is being supported by the detailed description of the invention. Claim 21 recites:

A motor arranged to be operated in a 4-pole configuration, a 6-pole configuration, and an 8-pole configuration, said motor comprising:

a stator core;

a rotor in rotational relationship with the stator core;

a first winding portion wound on the stator core, said first winding portion being energized in the 4-pole configuration only;

a second winding portion wound on the stator core, said second winding portion being energized in the 6-pole configuration only;

a third winding portion wound on the stator core, said third winding portion being energized in the 8-pole configuration only; and

a fourth winding portion wound on the stator core, said fourth winding portion being energized in the 4-pole configuration and the 8-pole configuration, but not being energized in the 6-pole configuration.

Each and every element of claim 21 is described in the detailed description of the invention. First, an exemplary embodiment of the stator core is illustrated in Figs. 2 and 3 and described in the second full paragraph of page 10 of the application. In addition, Fig. 3 also illustrates an exemplary rotor 330 that is mounted in a rotational relationship with the stator core. Exemplary implementations of the rotor are further described in the first paragraph of page 17 of the application.

Each and every one of the winding portions recited by claim 21 is also described in the detailed description. In one particular example, the first winding portion recited in claim 21 may be a winding portion 102 or 104 of Fig. 1, which is being energized in the 4-pole configuration but not in the 6-pole configuration or the 8-pole configuration. (*See Application, first full paragraph of page 7 to the second full paragraph of page 8*). In another particular example, the second winding portion recited in claim 21 may be a winding portion 120 of Fig.

1 or one or more of winding portions 120A to 120F of Fig. 2. As described in the detailed description of the invention, the exemplary winding portion 120 or winding portions 120A to 120F are preferably being energized in the 6-pole configuration but not in the 4-pole configuration or the 8-pole configuration. (See *id*). In one further particular example, the third winding portion recited in claim 21 may be a winding portion 140 of Fig. 1 or one or more of winding portions 140A to 140D of Fig. 2. Also described in the detailed description of the invention, the exemplary winding portion 140 or winding portions 140A to 140D are preferably being energized in the 8-pole configuration but not in the 4-pole configuration or the 6-pole configuration. (See *id*). Finally, in yet another particular example, the fourth winding portion recited in claim 21 may be a winding portion 106 of Fig. 1. The exemplary winding portion 106 is preferably being energized in the 4-pole configuration and the 8-pole configuration, but not in the 6-pole configuration. (See *id*).

Each and every element of claim 22 is also described in the detailed description of the invention. Claim 22 recites:

A motor as set forth in claim 21 further comprising a fifth winding portion wound on the stator core, said fifth winding portion being energized in the 4-pole configuration, the 6-pole configuration, and the 8-pole configuration.

In one particular example, the fifth winding portion recited in claim 22 may be a winding portion 108 of Fig. 1. The exemplary winding portion 108 as described in the detailed description of the invention is preferably being energized in the 4-pole

configuration, the 6-pole configuration, and the 8-pole configuration. (*See id*).

In light of the above, Applicants submit that the subject matter recited in claims 21 and 22 is being supported by the detailed description of the invention, and the § 112 objection should be withdrawn.

2.-3. Claims 1, 2, 5, 6 and 9-14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Fei I* (U.S. Patent Number 6,271,639). Applicants acknowledge that *Fei I* has a common inventor with the present application. However, Applicants submit that claims 1, 2, 5, 6 and 9-14, as amended, are patentably distinguished from *Fei I*.

Regarding claims 1, 10 and 12, the Examiner argues that *Fei I* teaches a partially shared winding energized in its entirety when the motor is operated in the 4-pole configuration and less than its entirety when the motor is operated in the 8-pole configuration. Applicants disagree that *Fei I* teaches such a partially shared winding. *Fei I* discloses a capacitor start single phase induction motor with partial winding starting. The term "partial winding starting," as used in *Fei I*, does not mean partially sharing a winding as taught by the present invention. Partial winding starting of *Fei I* directs to starting a motor to operate in the 8-pole (or 4-pole) configuration by selectively energizing a portion only of the 4-pole (or 2-pole) configuration of winding and a 4-pole (or 2-pole) auxiliary winding. (*See Fei I*, claim 1, 10 and 17). In other words, the subject matter of *Fei I* directs to partially energizing the main winding in order to start the motor in a particular pole configuration. The subject matter of *Fei I* does not direct to partially sharing a winding.

Applicants further submit that even though *Fei I* allows a shared winding between the 4-pole configuration and the 8-pole configuration, this shared winding is a **fully shared winding** instead of the **partially shared winding** of the present invention. In *Fei I*, "**the entire 8-pole configuration of the main winding is part of the 4-pole configuration of the main winding so that there is no independent 8-pole winding.**" (*Fei I*, claim 5). For example, one exemplary embodiment of the 4-pole start and run configurations in *Fei I* includes windings 108L, 108R/114 and 110 of Fig. 1. (See *Fei I*, col. 3, lines 36-47). One exemplary embodiment of the 8-pole start configuration in *Fei I* includes the windings 108R/114 and 110 of Fig. 1. (See *Fei I*, col. 3, line 61 to col. 4, line 3). One exemplary embodiment of the 8-pole run configuration in *Fei I* includes the windings 108L and 108R/114 of Fig. 1. (See *Id*). As can be seen in these embodiments of *Fei I*, both the 8-pole start configuration and the 8-pole run configuration of the main winding are **fully shared** with the 4-pole configuration of the main winding. *Fei I* also fails to teach or suggest the partially shared winding of the present invention.

Claim 1, as amended, now recites that the motor also comprises "an unshared winding portion on the stator core, said unshared winding portion being energized in connection with a winding portion of the partially shared winding when it is desirable to operate the motor in the 8-pole configuration." In one particular example, this unshared winding portion may be winding portion 140 of Fig. 1 or one or more of winding portions 140A to 140D of Fig. 2. As such, this exemplary unshared winding portion is not being energized when the motor is operated in the 4-pole configuration, but is energized when the motor is operated in the 8-pole configuration. Thus, according

to the particular example, NOT the entire 8-pole configuration of the main winding is part of the 4-pole configuration of the main winding. Applicants submit that *Fei I* is distinguishable from the present invention because the entire 8-pole configuration in *Fei I* is part of the 4-pole configuration of the main winding. That is, *Fei I* discloses a fully shared winding but fails to disclose the partially shared winding of claim 1. Thus, *Fei I* fails to teach or suggest each and every element of claim 1. *Fei I* further teaches away from claim 1 by teaching a fully shared winding. Accordingly, claim 1 is believed to be allowable over *Fei I*.

Claim 10, as amended, now recites that "the third one of the plurality of winding components is only energized when the motor is operated at the 8-pole speed." As one particular example, the third one of the plurality of winding components may be a winding component that is included in the 8-pole configuration but not included in the 4-pole configuration (i.e., the winding component is only energized when the motor is operated at the 8-pole speed but not energized when the motor is operated at the 4-pole speed). *Fei I* does not disclose a winding component that is included in the 8-pole configuration but not included in the 4-pole configuration. Thus, *Fei I* fails to teach or suggest each and every element of claim 10. *Fei I* further teaches away from claim 10 by teaching a fully shared winding. Accordingly, claim 10 is believed to be allowable over *Fei I*.

Claim 12, as amended, now recites that "the second winding include[es] a third winding portion" and that "the first winding does not share the third winding portion of the second winding." Thus, according to one exemplary embodiment of the invention, the M-pole configuration of the second winding includes a

winding portion that is not included in the N-pole configuration of the first winding. *Fei I* is distinguishable from the present invention because every winding portion of the M-pole configuration of *Fei I* is included the N-pole configuration of the main winding. That is, *Fei I* discloses a fully shared winding but fails to disclose the partially shared winding of claim 12. Thus, *Fei I* fails to teach or suggest each and every element of claim 12. *Fei I* further teaches away from claim 12 by teaching a fully shared winding. Accordingly, claim 12 is believed to be allowable over *Fei I*.

Regarding claim 9, the Examiner argues that *Fei I* describes an auxiliary winding and a starting switch to initiate a rotation of the motor, wherein the switch de-energizes the auxiliary winding when the rotation of the rotor exceeds a rotational threshold. Applicants submit that even though *Fei I* discloses an auxiliary winding and a switch, it fails to disclose de-energizing the auxiliary winding when the rotation of the rotor exceeds a rotational threshold, as recited by claim 9. Accordingly, *Fei I* fails to teach or suggest each and every element of claim 9, and claim 9 should be allowable over *Fei I*.

Claims 2, 5 and 6 depend from claim 1; claim 11 depends from claim 10; and claims 13 and 14 depend from claim 12. Accordingly, claims 2, 5, 6, 11, 13 and 14 should be allowable for at least the same reasons that claims 1, 10 and 12 are allowable.

4.-5. Claims 12 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Fei II* (U.S. Patent Number 6,175,209). The Examiner argues that *Fei II* describes a motor having a shared main winding and shared auxiliary winding comprising a rotor, a first winding being selectively energized in an N-pole configuration wherein N is 2, a second winding

being selectively energized in an M-pole configuration wherein M is an even integer at least two times N. Applicants submit, however, that *Fei II* also fails to disclose the partially shared winding of claim 12. For example, in one embodiment according to *Fei II*, the 2-pole configuration includes main windings M1, M2 and M3 and auxiliary windings A1, A2 and A3. The 4-pole configuration of *Fei II* includes main windings M2 and M3 and auxiliary windings A2 and A3. (See *Fei II*, col. 3, lines 13-30). Thus, in *Fei II*, the entire 4-pole configuration of the main winding is part of the 2-pole configuration of the main winding such that there is no independent 4-pole winding. In other words, *Fei II* discloses a fully shared winding instead of the partially shared winding of claim 12.

In addition, *Fei II* only describes the 2-pole and 4-pole configurations of the main and auxiliary windings. Claim 12 recites that the first winding is being selectively energized in the N-pole configuration and that the second winding is being selectively energized in the M-pole configuration. The N-pole configuration of claim 12 is not limited to the 2-pole configuration of *Fei II*. Instead, the number N of claim 12 may be any integer at least two and multiple of two. The M-pole configuration of claim 12 is not limited to the 4-pole configuration of *Fei II*. Instead, the number M of claim 12 may be any even integer that is at least two-times N. *Fei II* fails to teach or suggest that the pole configurations can be other than 2-pole and 4-pole. Accordingly, *Fei II* fails to disclose each and every element of claim 12, and claim 12 is believed to be allowable over *Fei II*.

Claim 13 should be allowable over *Fei II* based on its dependency from allowable claim 12.

6. Applicants thank the Examiner for indicating that claims 15-20 are allowed.

7. Claims 3, 4, 7 and 8 stand objected as being dependent upon a rejected base claim. In light of the above remarks, claim 1 is believed to be allowable over *Fei I*. Claims 3, 4, 7 and 8 depend from claim 1 and, as such, should be allowable based on their dependency from an allowable base claim. Accordingly, Applicants respectfully request that the Examiner withdraw the objections to claims 3, 4, 7 and 8.

8. The other references made of record are cumulative and no more relevant than the references already applied by the Examiner. Thus, the amended claims distinguish over the prior art and are patentable.

It is felt that a full and complete response has been made to the Office action and, as such, places the application in condition for allowance. Such allowance is hereby respectfully requested. If the Examiner feels, for any reason, that a personal interview will expedite the prosecution of this application, she is invited to telephone the undersigned.

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Any required fees or overpayments should be applied to
Deposit Account No. 19-1345.

Respectfully submitted,

A handwritten signature in cursive script, reading "Frank R. Agovino".

Frank R. Agovino, Reg. No. 27,416
SENNIGER, POWERS, LEAVITT & ROEDEL
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

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